REMARKS

A Request for Continued Examination is submitted concurrently herewith, together with the appropriate fee. Accordingly, further examination of this application is requested in accordance with the foregoing amendment.

Applicants acknowledge the allowance of Claims 3 and 5, as set forth at page 4 of the Office Action, as well as the indication of the allowability of the subject matter of Claim 13. In particular, the latter claim would be allowable if rewritten in independent form. Nevertheless, for the reasons set forth hereinafter, Applicants respectfully submit that Claim 13 is now allowable in its present dependent form.

Claims 1, 2, 6-9 and 18 have been rejected under 35 U.S.C. §102(b) as anticipated by Shirai et al, while Claims 17 and 19 have been rejected under 35 U.S.C. §103(a) as unpatentable over Shirai et al in view of Morikawa et al. However, as discussed hereinafter, Applicants respectfully submit that each of the foregoing claims distinguishes over both Shirai et al and Morikawa et al.

The present invention provides a control apparatus for controlling a vehicle that has a plurality of different vehicle control modes or alarm modes, such as an adaptive cruise control (ACC control unit 5 in Figure 1), a tracking-upon-congestion control unit 6, a headway distance alarm 7 and a collision reduction control unit 8. Each of these control modes or alarm modes utilizes a

headway distance that is measured by an "obstruction detection means" 10, as a parameter for implementing the respective control modes or alarm modes.

In addition, a means for judging a "detection performance level" as recited in Claim 1, detects the performance level of the obstruction detection means, which is provided in the form of a radar device. In particular, the performance level is classified into one of three ratings, 0, 1 and 2, the level 2 indicating the best performance of the obstruction detection by the radar, while the level 1 indicates a moderate performance and the level 0 indicates poor performance.

According to the invention, individual ones of the various control modes or alarm modes (referred to previously) are selectively deactivated or activated based on the judged detection performance level. That is, as illustrated in the table of Figure 2, when the detection performance level is evaluated at level 2, all of the vehicle control modes and alarm modes are turned on or activated. If the detection performance is determined to be at level 1, however, the ACC control unit 5 is turned off, and the remainder of the control units 6, 8 and the alarm unit are turned on. Finally, when a detection performance level 0 is judged to exist, the ACC control unit 5 and the tracking-upon-congestion control unit 6 are turned off, while the headway distance alarm unit 7 and the collision reduction control unit 8 remain activated.

Claim 1, as amended, recites that the control apparatus according to the invention includes means "for performing a plurality of vehicle control or alarm

control modes" on the basis of a measured headway distance, and that such modes include at least two of a tracking-upon-congestion control mode, an adaptive cruise control mode and a collision reduction control mode. Furthermore, Claim 1, as amended, now recites means for "selectively enabling or interrupting operation of individual ones of said control or alarm modes in accordance with said detection performance level". The latter features of the invention are neither taught nor suggested by the cited references. In the "Response to Arguments" at page 5 of the Office Action, the Examiner has noted that Shirai et al includes a vehicle control mode, which includes the throttle or brakes based on the detection performance. However, these types of vehicle operating systems, differ significantly from the plurality of vehicle control or alarm modes recited in Claim 1, which include in particular, a tracking-upon-congestion control mode, an adaptive cruise control mode and a collision reduction control mode. Shirai et al includes no provision for activating or deactivating the latter operating modes. Moreover, it is also noted that while the throttle and brakes may arguably constitute "vehicle controls", nothing contained in Shirai et al teaches or suggests that either the throttle control or the brake control be interrupted on any basis. Indeed, interruption of either of these controls would have a potentially catastrophic effect on the operation of the vehicle, and thus would be highly undesirable.

Finally, nothing in Shirai et al teaches or suggests a step of selectively enabling or interrupting the operation of individual ones of the vehicle controls,

such as referred to previously. If indeed Shirai's system were deemed to include two or more different vehicle control modes, all such control modes would be enabled or disabled when the weather condition is bad, irrespective of the radar performance level, insofar as the disclosure indicates. That is, Shirai et al makes no provision for selectively enabling or disabling individual control modes.

In light of the foregoing remarks, this application should be in condition for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #381AS/50959).

Respectfully submitted,

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